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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,721	10/28/2003	Jerrel C. Anderson	AD7065 USNA	5537

23906 7590 02/26/2007
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4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

NAKARANI, DHIRAJLAL S

ART UNIT	PAPER NUMBER
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1773

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/695,721

Applicant(s)

ANDERSON, JERREL C.

Examiner

D. S. Nakarani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-43 is/are pending in the application.
- 4a) Of the above claim(s) 34-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-33 and 41-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/18/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 34-40 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 19, 2005.
3. The Examiner interprets embodiments claims 28-31 as follows:
 - Embodiment of claim 28: A/B/A/I/G
 - Embodiment of claim 29: G/A/B/A/I/G
 - Embodiment of claim 30: G/A/B/A/I/G and
 - Embodiment of claim 31: G/A/B/A/I/GWherein A: represents thermoplastic polymer sheet (Claimed ionomer sheet), B: represents film, which either reflect or absorb IR light, G: represents glass layer and I: represents a layer of transparent interlayer material (claim 28), layer of polyvinyl butyral (claim 29) or plasticized polyvinyl butyral (claims 30 and 31).

If the Examiner is incorrect in his interpretation, applicant is requested to specify correct embodiment of the above claims. The following rejection is based on the above interpretation.

4. Claims 28 and 29 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the layer of transparent plasticized interlayer (Page for lines 17-18), does not reasonably provide enablement for either at least one layer of transparent interlayer material (Claim 28) or at least one layer of polyvinyl butyral (Claim 29). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. As per page 4, lines 8-13, the unplasticized PVB is not suitable for use in glazing due to properties such as high modulus and low tensile strength. The inventions as claimed in claims 28 and 29 read on unplasticized transparent interlayer material such as unplasticized PVB. Thus inventions as claimed in claims 28 and 29 are broader in scope than disclosed in the instant disclosure.

5. Claims 30 and 31 are duplicate claims as per above interpretation.

6. Claims 11-33 and 41-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 33, line 9, the phrase "ethylene/ α - β -unsaturated copolymer ionomer" renders claims indefinite. It is not clear from claim language whether applicant is trying to claim "ethylene/ α - β -unsaturated copolymer ionomer" or "ethylene/ α - β -

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unsaturated carboxylic acid copolymer ionomer": Clarification and/or correction requested.

7. Claims 11-27, 32, 33, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frost et al (U. S. Patent 5,932,329) in view of Bolton et al (U.S. Patent 4,668,574) with, as an evidence, Swofford (U. S. Patent 5,082,738) for the reasons of record set forth in paragraph 6 of the Office Action mailed July 19, 2006 (Paper Number 20060710).

8. Claims 28-31 and 41 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraphs, set forth in this Office action.

9. Receipt of Information Disclosure Statement filed January 18, 2007 is acknowledged and all recited documents have been made of record.

10. Applicant's arguments filed December 18, 2006 have been fully considered but they are not persuasive. In reference to rejection of claims 11-27, 32 and 33 under 35 U.S.C. 103(a) as being unpatentable over Frost et al (U. S. Patent 5,932,329) in view of Bolton et al (U.S. Patent 4,668,574) with, as an evidence, Swofford (U. S. Patent 5,082,738), applicant mainly argues that Frost et al describe a laminate of a film with IR reflecting coating sandwiched between two thermoplastic polyurethane and/or polyvinyl butyral layers. Support films for IR reflecting coating includes polyethylene

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terephthalate. Frost et al describe that distortion experienced in the past with these types of laminate is reduced or eliminated if the thermoplastic polyurethane and/or polyvinyl butyral sheet on one side is at most 50 microns thick. Applicant further argues that Bolton et al describe ionomer resins, films and sheets for laminated articles and points to three types of structures shown in various figures. Applicant points to Figures 10 and 13. However there are no such figures described by Bolton et al. In addition applicant states that Swofford describes use of silane coupling agent to improve the bonding properties of polyester films and polyvinylbutyral, polycarbonate, polyurethane, polyolefines and similar films. Swofford also describes use of primer coating to enhance adhesion between ionomer and glass or polycarbonate.

These arguments are unpersuasive because Frost et al do not teach that the distortion experienced in the past with these types of laminate is reduced or eliminated if the thermoplastic polyurethane and/or polyvinyl butyral sheet is used. Frost et al clearly teach any of the adhesive material known from normal laminated glass can be considered for the adhesive layer (Col. 3, lines 21-28). Frost et al eliminated problem of distortion by using one thin adhesive layer and other thicker adhesive layer. Bolton et al teach ionomer as an adhesive to eliminate problem associated with polyvinyl butyral adhesive and polyurethane adhesive. Swofford reference is used as an evidence showing Bolton et al's silane Z-6020 is an amino silane same as claimed in the present invention. Further more Swofford also discloses that the primed polyester film can be same as used by Frost et al and by Bolton et al (Col. 6, lines 20-32).

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11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



D. S. Nakarani
Primary Examiner
Art Unit 1773

DSN
February 22, 2007.